

FIG. 1

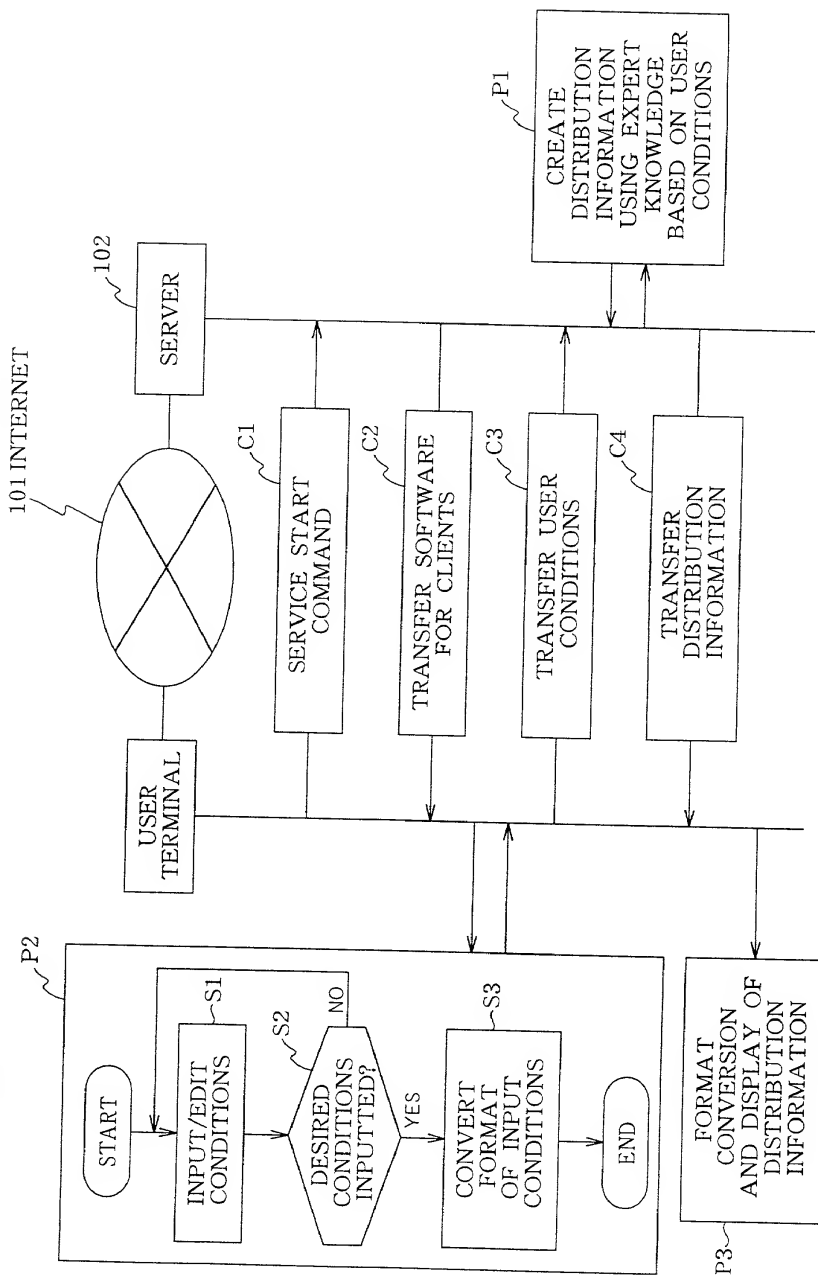


FIG. 2

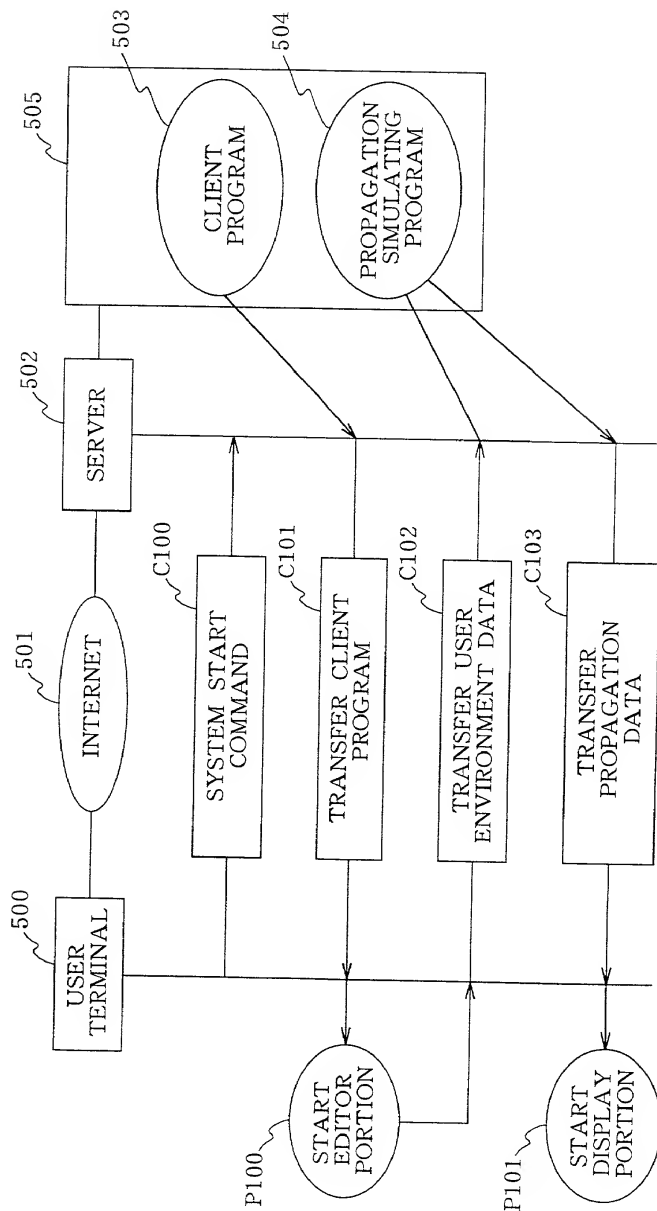
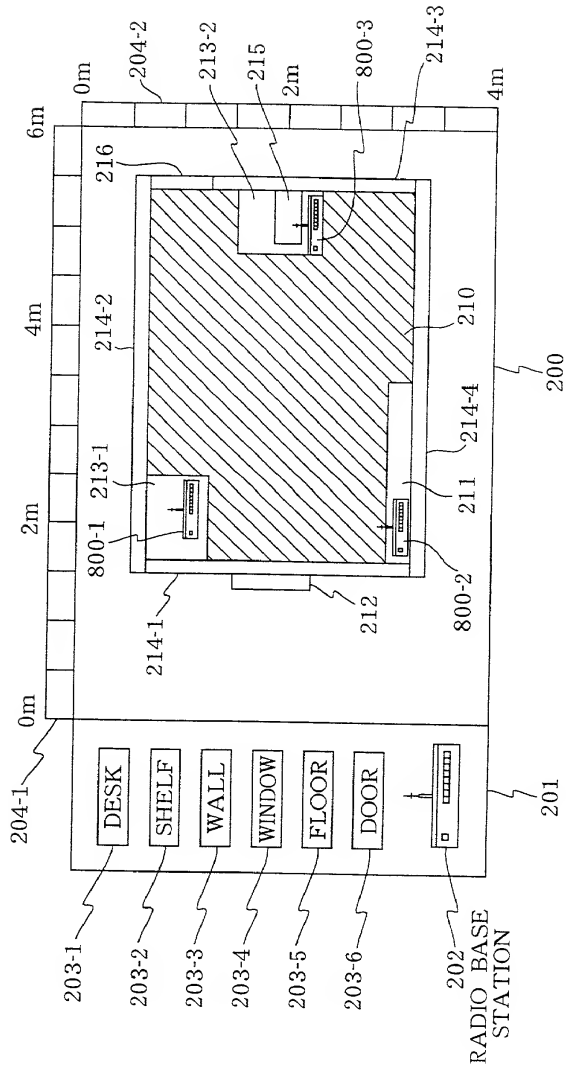
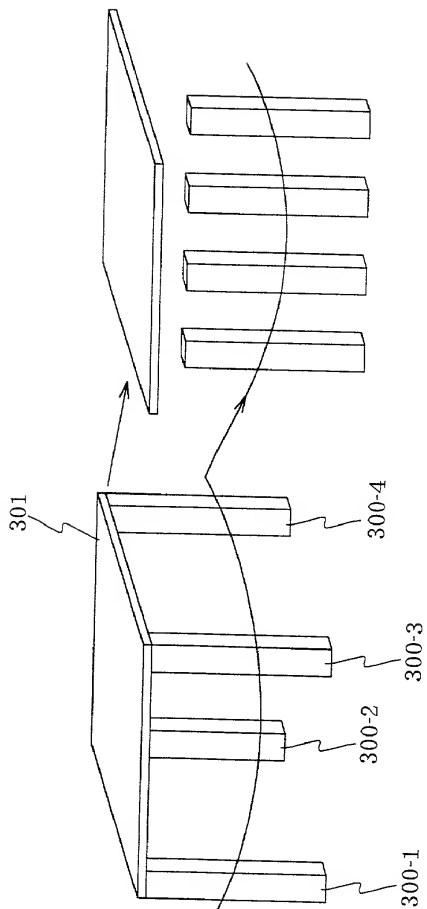
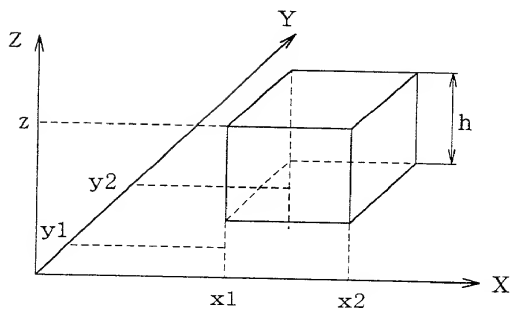


FIG. 3



**FIG. 4**

**FIG.5****FIG.6**

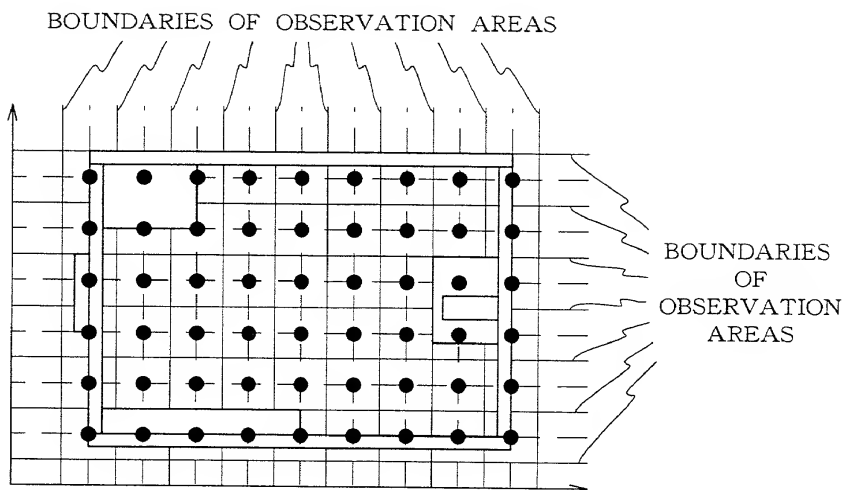
POSITION (METER)						MATERIAL
x1	x2	y1	y2	z	h	
1.5	2.1	1.2	1.2	1.2	0.05	METAL
1.5	1.6	1.2	1.3	1.15	0.8	TIMBER
⋮	⋮	⋮	⋮	⋮	⋮	⋮
2.0	2.1	1.2	1.3	1.15	0.8	TIMBER

**FIG.7**

POSITION(METER)			ANTENNA	SENDING ELECTRIC POWER
x	y	z		
3.0	1.5	1.0	DIBALL	100mW

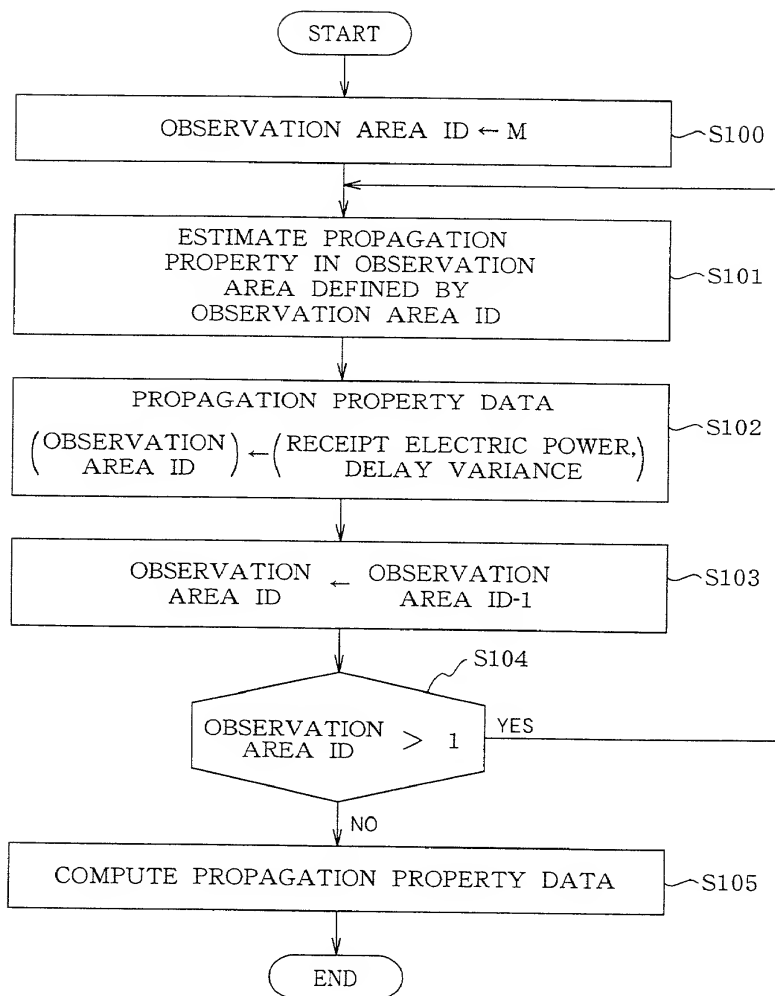
FIG. 8

DELAY VARIANCE		RECEIPT ELECTRIC POWER			
DELAY VARIANCE THRESHOLD VALUE 3	IMPOSSIBLE	IMPOSSIBLE	POSSIBLE	POSSIBLE	
	IMPOSSIBLE	POSSIBLE	GOOD	GOOD	
	POSSIBLE	GOOD	VERY GOOD	VERY GOOD	
	POSSIBLE	GOOD	VERY GOOD	VERY GOOD	
DELAY VARIANCE THRESHOLD VALUE 2		RECEIPT ELECTRIC POWER THRESHOLD VALUE 2			
DELAY VARIANCE THRESHOLD VALUE 1	IMPOSSIBLE	IMPOSSIBLE	POSSIBLE	POSSIBLE	
	IMPOSSIBLE	POSSIBLE	GOOD	GOOD	
	POSSIBLE	GOOD	VERY GOOD	VERY GOOD	
	POSSIBLE	GOOD	VERY GOOD	VERY GOOD	
DELAY VARIANCE THRESHOLD VALUE 1		RECEIPT ELECTRIC POWER THRESHOLD VALUE 1			
DELAY VARIANCE THRESHOLD VALUE 1	IMPOSSIBLE	IMPOSSIBLE	POSSIBLE	POSSIBLE	
	IMPOSSIBLE	POSSIBLE	GOOD	GOOD	
	POSSIBLE	GOOD	VERY GOOD	VERY GOOD	
	POSSIBLE	GOOD	VERY GOOD	VERY GOOD	

**FIG.9****FIG.10**

OBSERVATION AREA					COMMUNICATION POSSIBILITY
HEIGHT ABOVE FLOOR	x1	x2	y1	y2	
100 cm	0 cm	10 cm	0 cm	10 cm	IMPOSSIBLE
	0 cm	10 cm	10 cm	20 cm	POSSIBLE
	0 cm	10 cm	20 cm	30 cm	GOOD
	0 cm	10 cm	30 cm	40 cm	VERY GOOD
	⋮	⋮	⋮	⋮	⋮

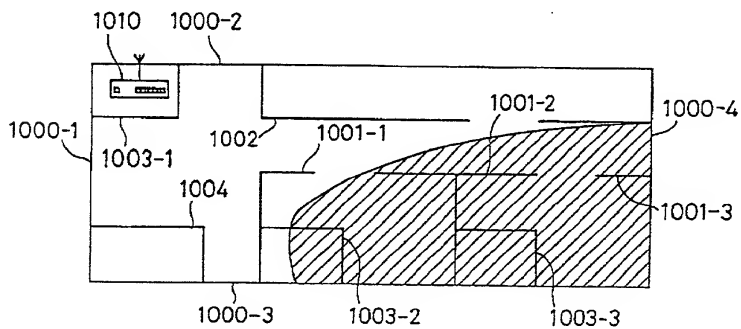
FIG. 11





**FIG. 12**

OBSERVATION AREA ID	RECEIPT ELECTRIC POWER	DELAY VARIANCE
1	-60 dBm	20 NANOSECONDS
2	-65 dBm	150 NANOSECONDS
3	-68 dBm	30 NANOSECONDS
4	-72 dBm	200 NANOSECONDS
5	-88 dBm	20 NANOSECONDS
⋮	⋮	⋮
M		

**FIG. 13**

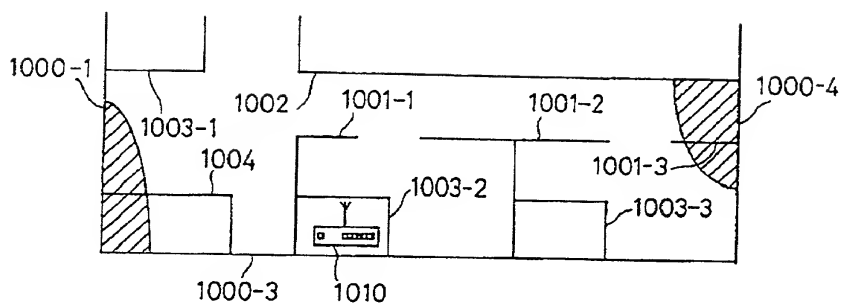
**FIG. 14**

FIG. 15

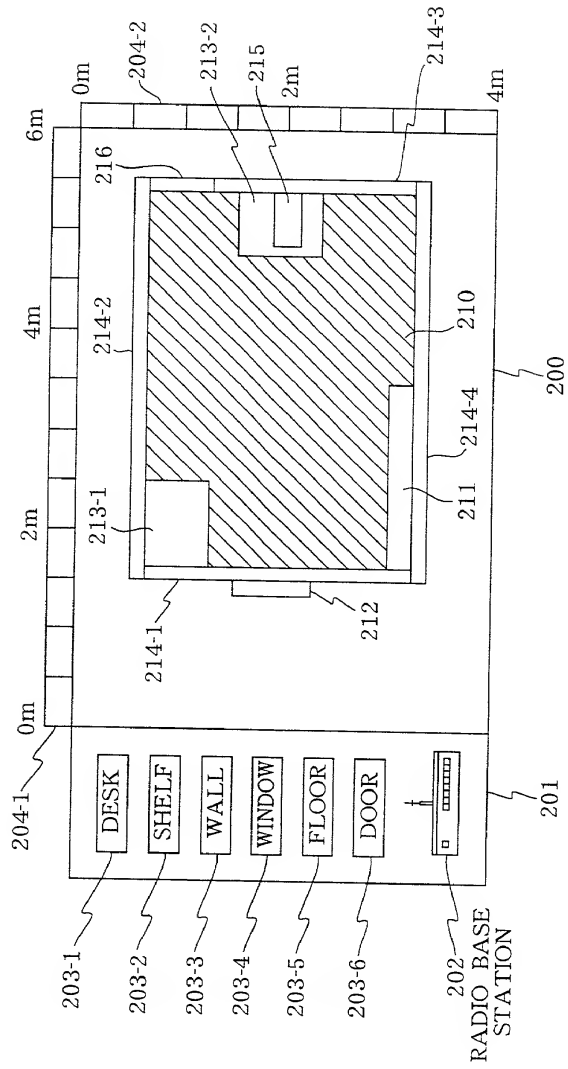




FIG.17

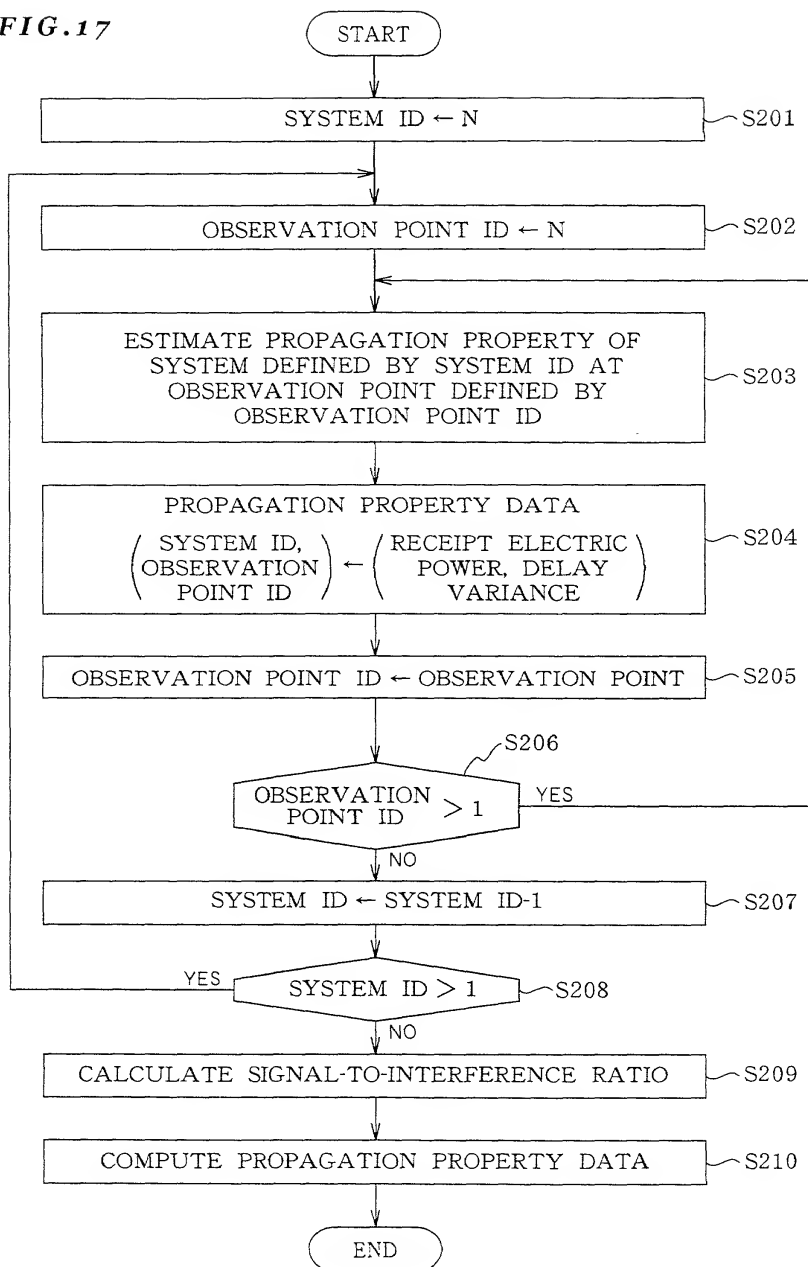


FIG.18

OBSERVATION POINT ID	SYSTEM ID=1		SYSTEM ID=2		SYSTEM ID=3	
	RECEIPT ELECTRIC POWER	DELAY VARIANCE SECONDS	RECEIPT ELECTRIC POWER	DELAY VARIANCE SECONDS	RECEIPT ELECTRIC POWER	DELAY VARIANCE SECONDS
1	-60 dBm	20 NANO SECONDS	-88 dBm	20 NANO SECONDS	-88 dBm	120 NANO SECONDS
2	-65 dBm	150 NANO SECONDS	-88 dBm	40 NANO SECONDS	-90 dBm	80 NANO SECONDS
3	-68 dBm	30 NANO SECONDS	-70 dBm	80 NANO SECONDS	-88 dBm	80 NANO SECONDS
4	-72 dBm	200 NANO SECONDS	-88 dBm	60 NANO SECONDS	-86 dBm	100 NANO SECONDS
5	-88 dBm	20 NANO SECONDS	-70 dBm	20 NANO SECONDS	-88 dBm	80 NANO SECONDS
• • • •	• • • •	• • • •	• • • •	• • • •	• • • •	• • • •
M						

FIG.18

FIG. 19

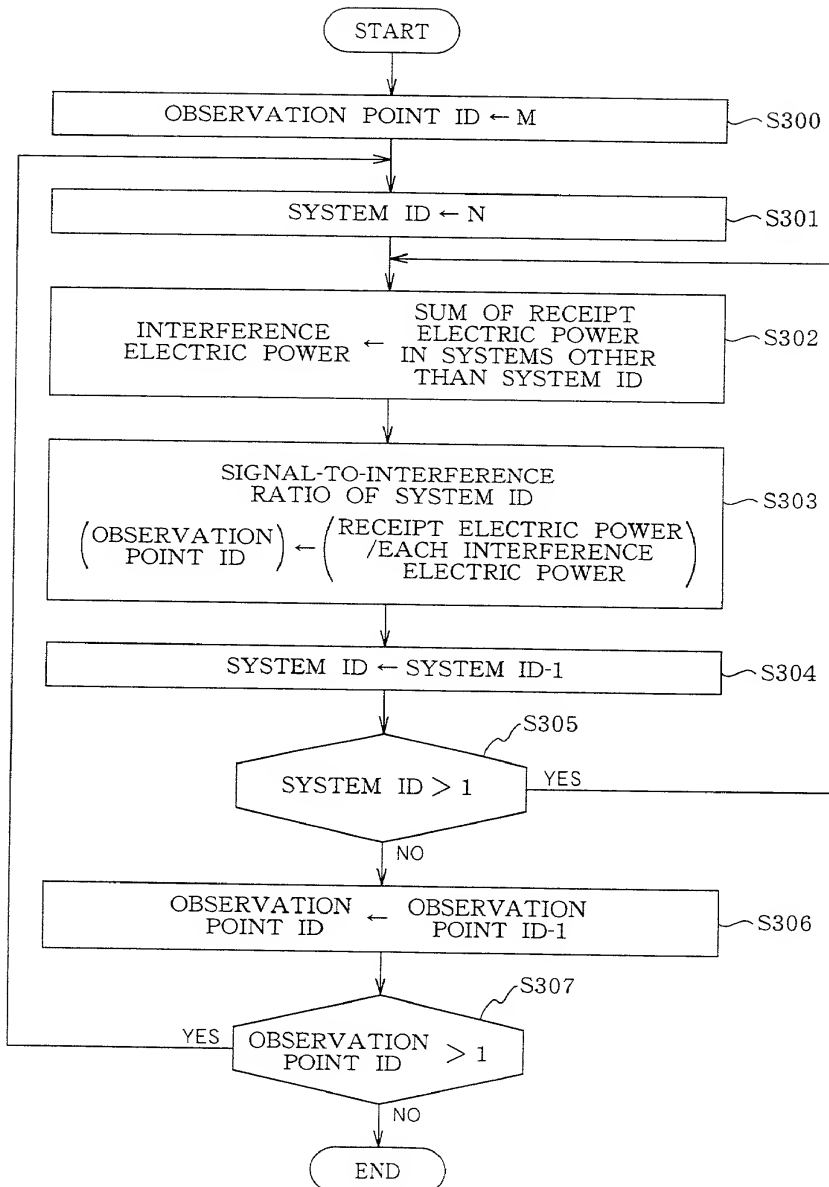






FIG. 21

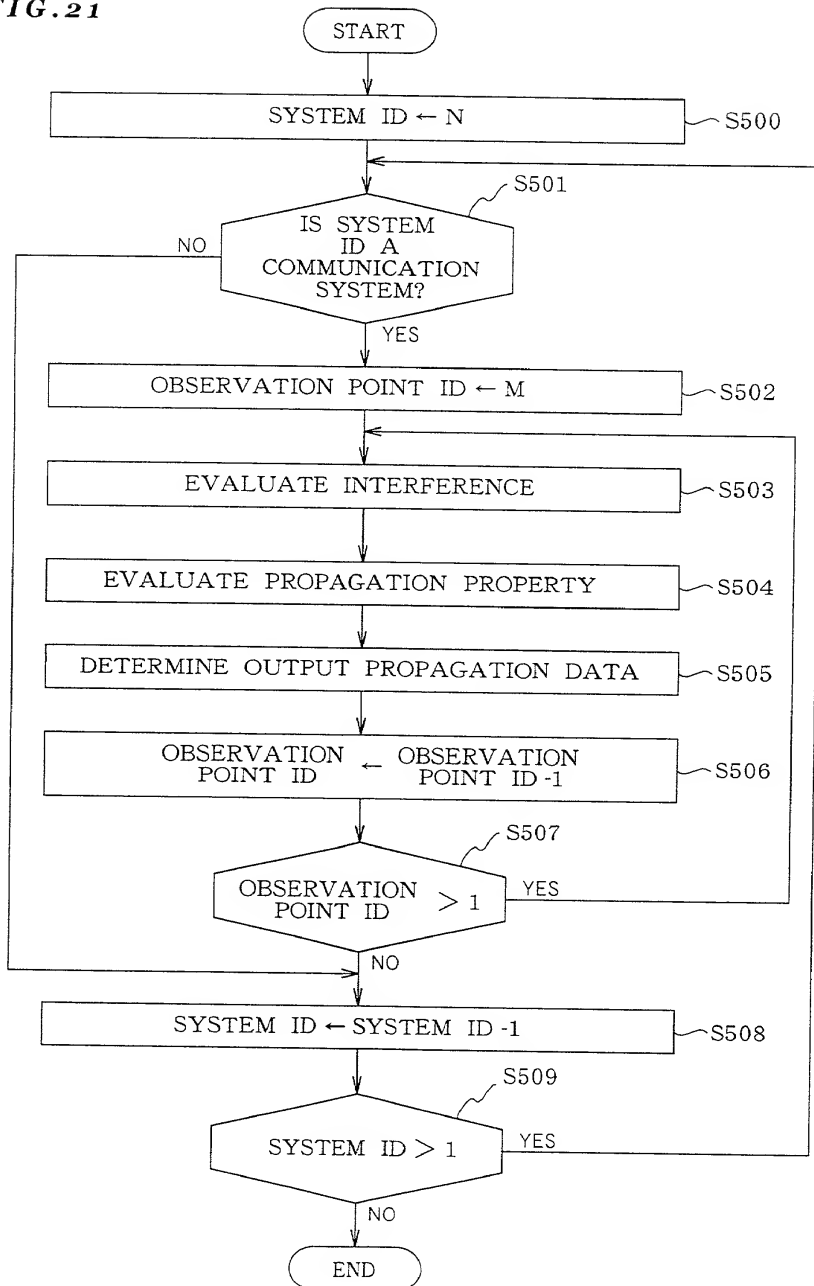


FIG. 22

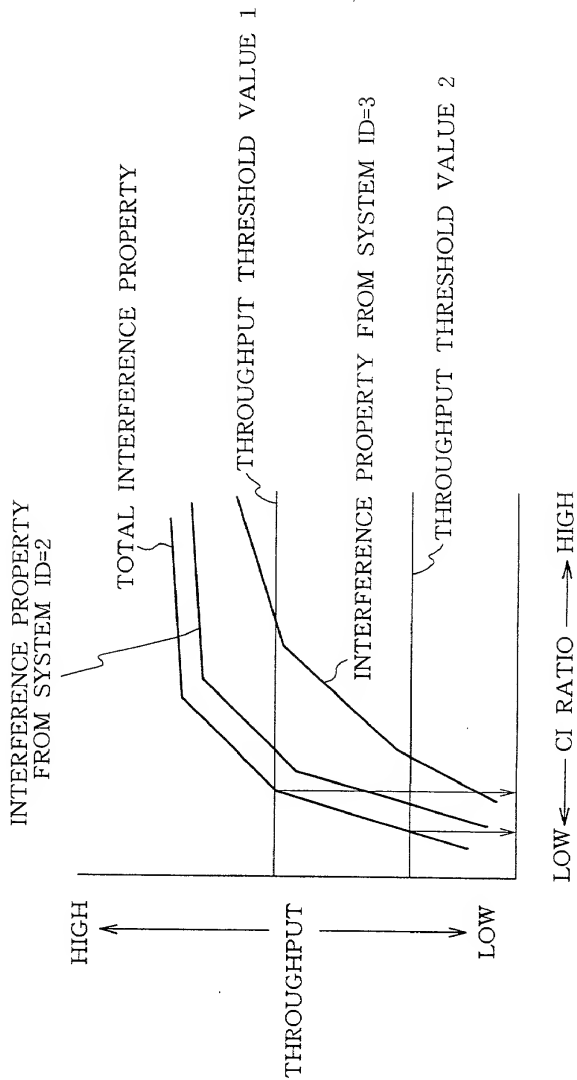


FIGURE 23

FIG.23

OBSERVATION AREA						COMMUNICATION POSSIBILITY		
HEIGHT ABOVE FLOOR	OBSERVATION POINT ID	x1	x2	y1	y2	SYSTEM ID=1	SYSTEM ID=2	SYSTEM ID=3
100 cm	1	0 cm	10 cm	0 cm	10 cm	C	A	B
	2	0 cm	10 cm	10 cm	20 cm	A	D	C
	3	0 cm	10 cm	20 cm	30 cm	D	C	D
	4	0 cm	10 cm	30 cm	40 cm	B	B	A
	.	.	.	.	.	.	.	.
	.	.	.	.	.	.	.	.
	.	.	.	.	.	.	.	.

**FIG.24**

INTERFERENCE DEGRADATION LEVEL  RECEIPT POSSIBILITY	LARGE	MIDDLE	SMALL
VERY GOOD	D	B	A
GOOD	D	C	B
POSSIBLE	D	D	C
IMPOSSIBLE	D	D	D

**FIG.25**

COLOR NUMBER	NAME	COLOR NUMBER	NAME
CL000	LIGHT RED	CL008	SEMI-DARK RED
CL001	LIGHT YELLOW	CL009	SEMI-DARK YELLOW
CL002	LIGHT GREEN	CL010	SEMI-DARK GREEN
CL003	LIGHT BLUE	CL011	SEMI-DARK BLUE
CL004	SLIGHTLY DARK RED	CL012	DARK RED
CL005	SLIGHTLY DARK YELLOW	CL013	DARK YELLOW
CL006	SLIGHTLY DARK GREEN	CL014	DARK GREEN
CL007	SLIGHTLY DARK BLUE	CL015	DARK BLUE

**FIG.26**

DELAY VARIANCE THRESHOLD VALUE 3  DELAY VARIANCE THRESHOLD VALUE 2  DELAY VARIANCE THRESHOLD VALUE 1	CL015	CL011	CL007	CL003
	CL014	CL010	CL006	CL002
	CL013	CL009	CL005	CL001
	CL012	CL008	CL004	CL000
	RECEIPT ELECTRIC POWER THRESHOLD VALUE 1	RECEIPT ELECTRIC POWER THRESHOLD VALUE 2	RECEIPT ELECTRIC POWER THRESHOLD VALUE 3	RECEIPT ELECTRIC POWER

**FIG.27**

BOUNDARIES OF OBSERVATION AREAS				
CL005	CL004	CL002	CL001	BOUNDARIES OF OBSERVATION AREAS
CL004	CL003	CL001	CL000	

**FIG.28**

COLOR NUMBER	NAME	COLOR NUMBER	NAME
CL000	RED	CL008	BLUISH GREEN
CL001	YELLOWISH RED	CL009	GREEN
CL002	REDDISH YELLOW	CL010	REDDISH GREEN
CL003	YELLOW	CL011	GREENISH RED
CL004	BLUISH YELLOW	CL012	PALE RED
CL005	YELLOWISH BLUE	CL013	PALE YELLOW
CL006	BLUE	CL014	PALE GREEN
CL007	GREENISH BLUE	CL015	PALE BLUE

**FIG.29**

DELAY VARIANCE	CL006	CL007	CL008	CL009
DELAY VARIANCE THRESHOLD VALUE 3	CL005	CL015	CL014	CL010
DELAY VARIANCE THRESHOLD VALUE 2	CL004	CL013	CL012	CL011
DELAY VARIANCE THRESHOLD VALUE 1	CL003	CL002	CL001	CL000
	RECEIPT ELECTRIC POWER THRESHOLD VALUE 1	RECEIPT ELECTRIC POWER THRESHOLD VALUE 2	RECEIPT ELECTRIC POWER THRESHOLD VALUE 3	RECEIPT ELECTRIC POWER

**FIG.30**

INTERFERENCE DEGRADATION LEVEL RECEIPT POSSIBILITY	LARGE	MIDDLE	SMALL
VERY GOOD	CL002	CL001	CL000
GOOD	CL006	CL005	CL004
POSSIBLE	CL010	CL009	CL008
IMPOSSIBLE	CL014	CL013	CL012

FIG. 31

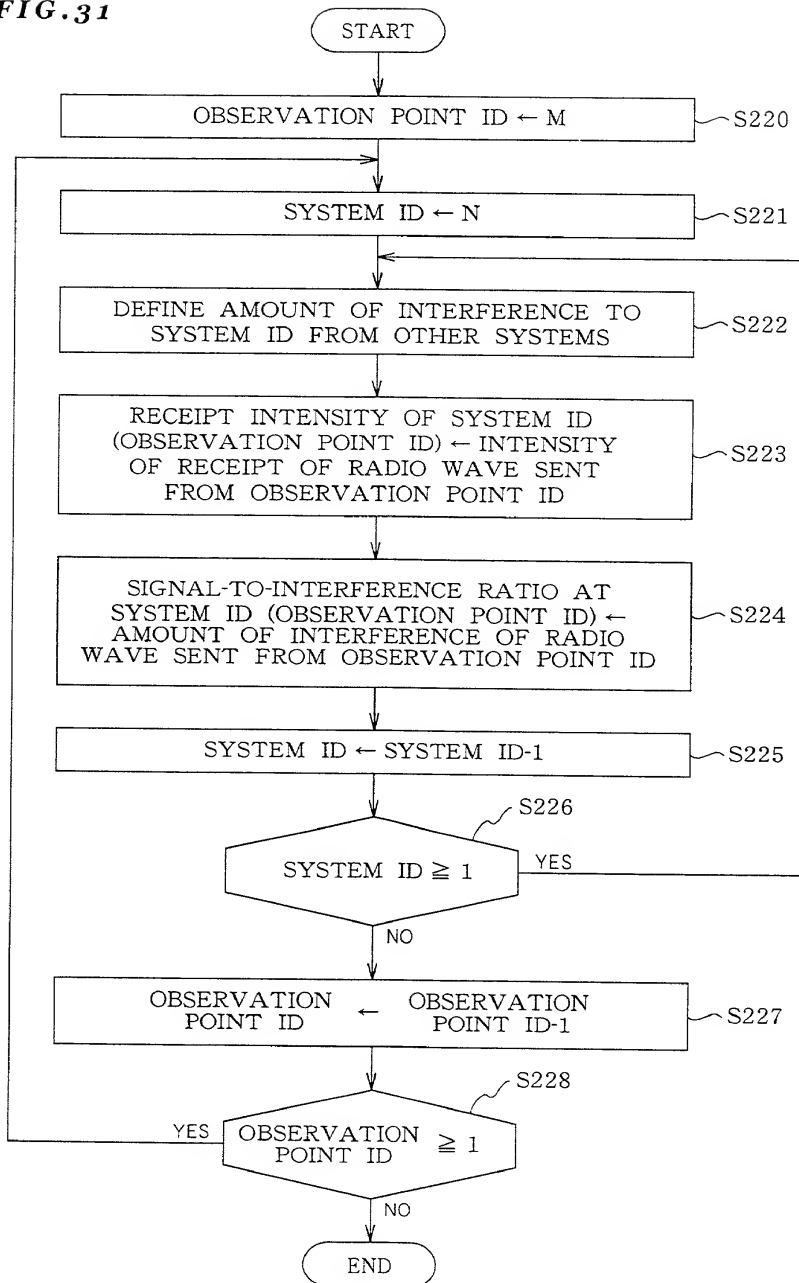




FIG.32

OBSERVATION POINT ID	SYSTEM ID=1			SYSTEM ID=2
	TOTAL INTERFERENCE ELECTRIC POWER	RECEIPT ELECTRIC POWER	SENDING POINT CI RATIO	
1	-70 dBm	-60 dBm	10 dB	• • •
2	-70 dBm	-65 dBm	5 dB	• • •
3	-70 dBm	-68 dBm	2 dB	• • •
4	-70 dBm	-72 dBm	-2 dB	• • •
5	-70 dBm	-88 dBm	-18 dB	• • •
•	•	•	•	•
•	•	•	•	•
•	•	•	•	•
M				

OBSERVATION POINT ID	SYSTEM ID=1			SYSTEM ID=2
	SENDING POINT CI RATIO INTERFERENCE DEGRADATION LEVEL	TOTAL CI RATIO INTERFERENCE DEGRADATION LEVEL	MIN (TOTAL CI RATIO, SENDING POINT CI RATIO) INTERFERENCE DEGRADATION LEVEL	
1	10 dB MIDDLE	25 dB SMALL	10 dB MIDDLE	
2	5 dB LARGE	21 dB SMALL	5 dB LARGE	
3	2 dB LARGE	2 dB SMALL	2 dB LARGE	
4	-2 dB LARGE	12 dB MIDDLE	-2 dB LARGE	
5	-18 dB LARGE	-18 dB LARGE	-18 dB LARGE	
• • •	• • •	• • •	• • •	
M				

↑ INTERFERENCE DEGRADATION LEVEL FOR ONE-WAY COMMUNICATION OF EACH OBSERVATION POINT → INTERFERENCE DEGRADATION LEVEL FOR TWO-WAY COMMUNICATION BETWEEN SENDING POINT IDENTIFIABLE BY SYSTEM ID AND OF SENDING POINT ID ENTIFIABLE BY SYSTEM ID

↑ INTERFERENCE DEGRADATION LEVEL FOR ONE-WAY COMMUNICATION OF SENDING POINT IDENTIFIABLE BY SYSTEM ID → EACH OBSERVATION POINT

↑ INTERFERENCE DEGRADATION LEVEL FOR TWO-WAY COMMUNICATION BETWEEN SENDING POINT IDENTIFIABLE BY SYSTEM ID AND EACH OBSERVATION POINT

FIG. 33

FIG. 34

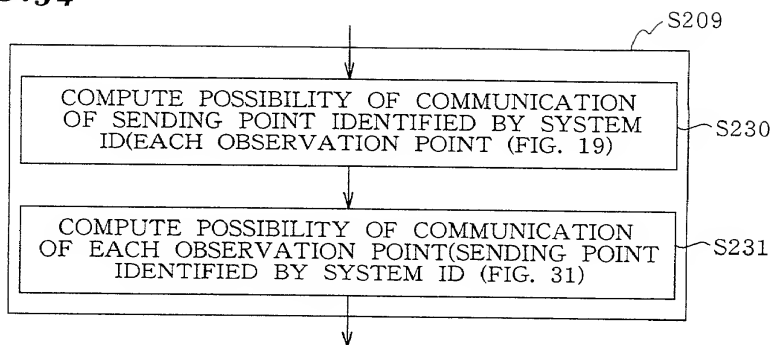


FIG. 35

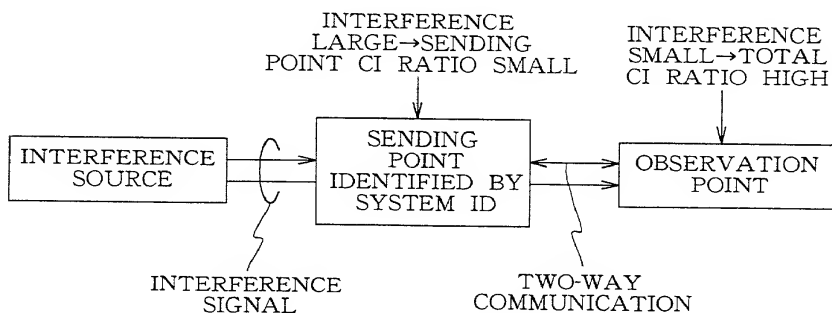


FIG. 36

